CLAIMS

1. A lithium ion secondary battery comprising: a positive electrode including a positive electrode active material comprising a lithium-containing composite oxide, a conductive material and a binder; a negative electrode; and a non-aqueous electrolyte, wherein said lithium-containing composite oxide is represented by the chemical formula:

$$Li_a(Co_{1-x-y}Mg_xAl_y)_bM_zO_c$$

where M is at least one element selected from the group consisting of Na and K, and the values a, b, c, x, y and z respectively satisfy $0 \leqq a \leqq 1.05$, $0.005 \leqq x \leqq 0.15$, $0.0001 \leqq y \leqq 0.01$, $0.0002 \leqq z \leqq 0.008$, $0.85 \leqq b \leqq 1.1$ and $1.8 \leqq c \leqq 2.1$.

2. The lithium ion secondary battery in accordance with claim 1, wherein said binder comprises polyvinylidene fluoride having a mean molecular weight of 150000 to 350000.